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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,781	01/23/2002	Yohei Mayuzumi	07200/017001	5728

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EXAMINER

KRISHNAN, SUMATI

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,781

Applicant(s)

MAYUZUMI, YOHEI

Examiner

Sumati Krishnan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01/23/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed depression existing in the second translucent substrate must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 7 is objected to because of the following informalities: Claim 7 reads identical to claim 3.

Claim 8 is objected to because of the following informalities: Claim 8 recites the limitation "EL element aggregation according to claim 7" There is insufficient antecedent basis for this limitation in the claim, as claim 7 never refers to an EL element aggregation.

Appropriate corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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2. Claims 1-2, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirotada et al (JP2000-040586).

Hirotada discloses an organic EL display comprising a first glass translucent substrate (element 1), an organic EL element (elements 11-13) provided on said first translucent substrate, and formed by layering an anode (11), a photoemissive layer (12) formed from a plurality of organic substances, and a cathode (13), and a second glass translucent substrate (6) which seals said organic EL element and characterized in that said second translucent substrate has a depression (see element 6 at points above elements 11-13) at a site corresponding to said organic EL element on the surface opposing said organic EL element, and the distance between the lower surface e of said first translucent substrate and the upper surface of said second translucent substrate is substantially constant across the entire surface of said first translucent substrate. See figure 3.

Regarding claim 2, Hirotada discloses both substrates 1 and 6 being made from glass, see English translation page 2 which discloses element 1 made out of glass, and page 5 which discloses the "closure member" or element 6 made out of glass.

Regarding claim 14, the EL element is provided on top of the substrate 5e, and at least one end face of said first translucent substrate (1) substantially coincides with at least one end face of said second translucent substrate (6) in a direction perpendicular to the main surfaces of said first and second translucent substrates. See figure 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3-4, 7, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toshihiro et al (JP08-302340).

Regarding claim 3-4, 7 and 15, Toshihiro discloses an organic EL display comprising a first translucent substrate (see figure 1, element 1), an organic EL element provided on said first translucent substrate and formed by layering an anode (4), a photoemissive layer (layers 5-7) formed from a plurality of organic substances, and a cathode (8), and a second translucent substrate (3), and in which is formed an aperture (see portion of element 3 between the two ends accommodating layers 4-8) to accommodate said organic EL element, and a third translucent substrate (1), provided on top of said second translucent substrate, and characterized in that the distance between the lower surface of said first translucent substrate and the upper surface of said third translucent substrate is substantially constant across the entire surface of said first translucent substrate. See figure 1. At least one end face of said first translucent substrate substantially coincides with at least one end face of said second translucent substrate in a direction perpendicular to the main surfaces of said first and second translucent substrates. See figure 1.

Regarding claim 4, Toshihiro does not explicitly disclose the translucent substrates being glass. However, it is well known in the art to use glass as the translucent substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

have used glass because it has good optical transmissive properties while being relatively inexpensive.

Regarding claim 15, Toshihiro discloses at least one end of the first second and third substrates substantially coinciding, in a direction perpendicular to the main surfaces of the first second and third substrates, see figure 1.

Regarding claim 16, Toshihiro does not disclose an EL element aggregation. However, it is well known in the art to provide a matrix display comprising an aggregation of EL elements. Therefore, it would have been obvious to one of ordinary skill in the art to have used an aggregation of EL elements in order to provide lighting for various applications.

4. Claims 5-6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirotada et al (JP2000-040586).

Hirotada discloses an organic EL display comprising a first glass translucent substrate (element 1), an organic EL element (elements 11-13) provided on said first translucent substrate, and formed by layering an anode (11), a photoemissive layer (12) formed from a plurality of organic substances, and a cathode (13), and a second glass translucent substrate (6) which seals said organic EL element and characterized in that said second translucent substrate has a depression (see element 6 at points above elements 11-13) at a site corresponding to said organic EL element on the surface opposing said organic EL element, and the distance between the lower surface e of said first translucent substrate and the upper surface of said second translucent substrate is substantially constant across the entire surface of said first translucent substrate. See figure 3.

Hirotsada, does not disclose an EL element aggregation. However, it is well known in the art to provide a matrix display comprising an aggregation of EL elements. Therefore, it would have been obvious to one of ordinary skill in the art to have used an aggregation of EL elements in order to provide lighting for various applications.

5. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirotsada et al (JP2000-040586) in view of Kuribayashi et al (US 6236416). Hirotsada et al discloses a method of manufacture of organic EL displays comprising an organic EL element disposition process in which organic EL elements are formed by layering an anode, (figure 3, element 11) a photoemissive layer (12) formed from organic substances, the bottom surface of which is flat, a depression formation process in which depressions are formed at sites corresponding to each of said organic EL elements (portion of element 6 located above elements 11-13) on a second translucent substrate (element 6), the upper surface of which is flat, the first and second substrates are bonded together such that said organic EL elements face said depressions. See figure 3. Hirotsada does not disclose an EL element aggregation. However, it is well known in the art to provide a matrix display comprising an aggregation of EL elements. Hirotsada does not disclose the division process. However, Kuribayashi discloses division process in which said organic EL elements aggregation is cut and divided, together with the substrates, into individual organic EL elements. Therefore, Therefore, it would have been obvious to one of ordinary skill in the art to have modified Hirotsada's invention to include an aggregation of EL elements in order to provide lighting for various applications, and it would have been obvious to use Kuribayashi's division process in Hirotsada's invention having the

matrix array of EL elements because it is a simple and easy method for separating and providing multiple EL elements.

Regarding claim 10, Kuribayashi discloses the substrate having depressions formed by a masking and etching process, see for example column 10 lines 18-41, and column 21 line 42 – column 22 line 26.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toshihiro et al (JP08-302340) in view of Kuribayashi et al (US 6236416).

Toshihiro discloses an organic EL display comprising a first translucent substrate (see figure 1, element 1), an organic EL element provided on said first translucent substrate and formed by layering an anode (4) , a photoemissive layer (layers 5-7) formed from a plurality of organic substances, and a cathode (8), and a second translucent substrate (3), and in which is formed an aperture (see portion of element 3 between the two ends accommodating layers 4-8) to accommodate said organic EL element, and a third translucent substrate (1), provided on top of said second translucent substrate, and characterized in that the distance between the lower surface of said first translucent substrate and the upper surface of said third translucent substrate is substantially constant across the entire surface of said first translucent substrate. See figure 1. At least one end face of said first translucent substrate substantially coincides with at least one end face of said second translucent substrate in a direction perpendicular to the main surfaces of said first and second translucent substrates. See figure 1.

Toshihiro does not explicitly disclose the translucent substrates being glass. However, it is well known in the art to use glass as the translucent substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used glass

because it has good optical transmissive properties while being relatively inexpensive. Toshihiro discloses the three substrates bonded to each other, (see bonding element 2) with the EL element accommodated through the aperture. Toshihiro does not disclose an EL element aggregation. However, it is well known in the art to provide a matrix display comprising an aggregation of EL elements. Toshihiro does not disclose the division process. However, Kuribayashi discloses division process in which said organic EL elements aggregation is cut and divided, together with the substrates, into individual organic EL elements. Therefore, it would have been obvious to one of ordinary skill in the art to have used an aggregation of EL elements in order to provide lighting for various applications, and it would have been obvious to use Kuribayashi's division process in Toshihiro's invention having the matrix array of EL elements because it is a simple and easy method for separating and providing multiple EL elements.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirotsada et al (JP2000-040586) in view of Kuribayashi et al (US 6236416) further in view of Hirano et al (US 6120338). Hirotsada and Kuribayashi together disclose the method of manufacture as claimed in claim 10. However, neither specifically disclose a second etching process in which at least one end face of said organic EL element aggregation being etched. Hirano however discloses the etching of the EL element. Hirano discloses that etching is performed to finely pattern the organic layers and cathodes. Therefore, it would have been obvious to one of ordinary skill in the art to perform etching on the EL element of Hirotsada and Kuribayashi in order to provide finely patterned organic layers and cathodes.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Toshihiro et al (JP08-302340) in view of Kuribayashi et al (US 6236416) further in view of Hirano et al

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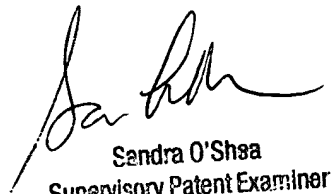
(US 6120338). Toshihiro and Kuribayashi together disclose the method of manufacture as claimed in claim 12. However, neither specifically disclose a second etching process in which at least one end face of said organic EL element aggregation being etched. Hirano however discloses the etching of the EL element. Hirano discloses that etching is performed to finely pattern the organic layers and cathodes. Therefore, it would have been obvious to one of ordinary skill in the art to perform etching on the EL element of Toshihiro and Kuribayashi in order to provide finely patterned organic layers and cathodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sumati Krishnan whose telephone number is 703-305-7906. The examiner can normally be reached on 8:00 am - 4:30 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 703-305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

SK
June 16, 2003



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800